

REMARKS

Claims 1-22, as amended, and new claims 23-28 are pending in this application for the Examiner's review and consideration upon entry of this amendment. Applicants would first like to thank Examiner Paden for the courtesy extended to attorney for Applicants, Dean L. Fanelli, in an August 3, 2006, telephone conference. The Examiner indicated that claims 1-22 were each included in the rejection under 35 U.S.C. § 103(a).

Claim 1 has been amended to incorporate the subject matter of claims 4 and 5 (*i.e.*, the oil composition contains saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids in a ratio of about 1:1:1). Claim 12 has also been amended to incorporate the subject matter of claims 15 and 16 (*i.e.*, the oil composition contains saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids in a ratio of about 1:1:1). New claims 23-28 have been added and are supported by the specification as-filed. Specific support for the new claims can be found in the specification as-filed as illustrated in the below table.

<u>Claim</u>	<u>Support in the Specification</u>
23	See published application at paragraph [0025].
24	See published application at paragraph [0017].
25	See published application at paragraph [0025].
26	See published application at paragraph [0025].
27	See published application at paragraph [0042].
28	See published application at paragraph [0022].

No new matter has been added by the amendments.

I. The Rejection Under 35 U.S.C. § 103 Should Be Withdrawn

Claims 1-22 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Lin, *Proceedings of the 1999 International Palm Oil Palm Oil Congress (Chemistry and Technology)*, Feb. 1-6, 1999, 82-93 ("Lin") as evidenced by *Baileys Industrial Oil and Fat Products*, Vol. 1, Fourth Ed., Swern ed., John Wiley & Sons, New York, 1979, pp. 383, 394, 399, and 430 ("Baileys") and in view of Taylor, *Oleagineux*, 31(2), 1976, pp. 73-79 ("Taylor").

As the Examiner is aware, the Federal Circuit has set forth three basic criteria that must be met to establish a *prima facie* case of obviousness. First, there must have been at the

time of the invention a motivation to combine or modify the teachings of the references cited. *Ecolchem, Inc. v. Southern California Edison Company*, 227 F.3d 1361, 1372 (Fed. Cir. 2000) (holding obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination); *see also In re Jones*, 958 F.2d 347 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988) (holding that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art). Second, the alleged prior art must teach or suggest all of the limitations of the claims alleged to be obvious. *In re Royka*, 490 F.2d 488 (CCPA 1974) (holding that to establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art); *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (holding that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure). Third, there must have been at the time of the invention a reasonable expectation of success. *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1207-1208 (Fed. Cir. 1991), *cert. denied* 502 U.S. 856 (1991) (holding that obviousness requires references to show that there was, at the time of the invention, a reasonable expectation of success).

According to the office action, Lin discloses combining palm oil with unsaturated oils such as soybean oil, corn and sunflower oils in proportions of 9:1 and 7:3; the blended oils are then cooled to 20 °C to 3 °C [*sic*] for crystallization and then separated by filtration. The office action alleges that although the fatty acid content of the unsaturated oil is not mentioned in Lin, it is well known in the art to fall within the levels of linoleic, oleic, and linolenic that is set forth in claim 1. The Examiner then asserts, the claim appears to differ from Lin in the recitation of the use of heating in the crystallization process.

According to the office action, Taylor teaches the advisability of heating palm oil to a [*sic*, temperature] of at least 70 °C prior to cooling in order to melt all of the crystals typically found in the oil. Thus, the office action alleges,

[i]t would have been obvious to heat the oil of Lin to a temperature of at least 70 °C in order to form a uniform liquid blend of oils for fractionation upon cooling. The filtration step of Lin is taken to be a low-pressure filter press in claim 2. The ratio of saturation and unsaturation in the fatty acids would have been obvious function of the amount of each of the oils used in the starting blend. The crystallization would have been an obvious function of the cooling

rate used in the process. Finally, the used [sic] of the oils in foods would have been an obvious matter of choice with regard to the particular edible oil that was available.

Applicants respectfully traverse the rejection for at least the following reasons.

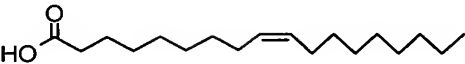
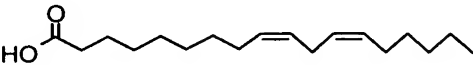
Applicants have amended claim 1; claim 1, as amended, now recites:

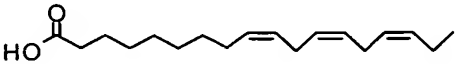
A blending and fractionation process for obtaining an oil composition, the process including the steps of:

- blending a vegetable oil with an unsaturated oil having an oleic content of more than 20% and linoleic and linolenic contents of more than 30% in a predetermined ratio to form a mixture;
- heating the mixture at a temperature of between 50 °C to about 65 °C until all crystals are melted;
- cooling the liquid obtained from step (b) to produce nucleation and obtain a mixture of oil and crystals wherein the crystals are of a suitable size and shape which permit efficient separation of the oil and crystals; and
- separating the mixture of oil and crystals to obtain the oil composition,

wherein said oil composition contains saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids in a ratio of about (0.5 to 1.0):1.0:(0.3 to 1.2).

The office action alleges on page 3 that the ratio of saturation and unsaturation in the fatty acids would have been an obvious function of the amount of each of the oils used in the starting blend; however, Applicants respectfully submit that this is not the case. Claim 1 recites blending a vegetable oil with an unsaturated oil having an oleic content of more than 20% and linoleic and linolenic contents of more than 30% in a predetermined ratio to form a mixture. The ratio of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids in the oil obtained from fractionation has a ratio of about 1:1:1.

<u>Olefin</u>	<u>Description</u>	<u>Structure</u>
Oleic	Oleic acid is a monounsaturated omega-9 fatty acid found in various animal and vegetable sources. It has the formula $C_{18}H_{34}O_2$	
Linoleic	Linoleic acid (LA) is an unsaturated omega-6 fatty acid with the molecular formula $C_{18}H_{32}O_2$.	

<u>Olefin</u>	<u>Description</u>	<u>Structure</u>
Linolenic	Alpha-linolenic acid is a polyunsaturated omega-3 fatty acid with the molecular formula $C_{18}H_{30}O_2$ and molar mass 278.43 g/mol.	

Lin discloses that palm oil was mixed with unsaturated oils such as soyabean, corn, and subflower oils in proportions of 9:1 and 7:3. Table 2 illustrates the fatty acid composition of palm olefins. According to table 2, the ratios of saturated fatty acids:monounsaturated fatty acids:polyunsaturated fatty acids is 1:1:0.3 for IV < 60; 0.8:1:0.3 for IV 60-64; and 0.7:1:0.3 for IV > 65.

However, the process and compositions recited by the pending claims as amended encompass a ratio of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids of about 1:1:1. Indeed, the specification discloses that there is the advantage of obtaining liquid fraction containing compositions of saturated fatty acids:monounsaturated fatty acids:polyunsaturated acids in the ratio of 1:1:1. (See published application at paragraph [0019]). The advantage of such oil composition is seen in the American Heart Association ("AHA") step 1 diet, recommended by the AHA.

Moreover, when a vegetable oil such as palm oil is blended with one or more unsaturated oils, the types of fatty acids and their relative proportions in the blended oil can be ascertained via calculation derived from the known composition and known relative proportions of the fatty acids in the starting materials (*i.e.*, in the vegetable oil such as palm oil and in each of the unsaturated oils) prior to the blending. However, after fractionation, the fatty acid composition in the blended oil is not the same as that prior to fractionation (*i.e.*, the fatty acid composition in the fractionated blended oil cannot be ascertained from the amount of each of the oils used in the starting blend).

Applicants respectfully submit that the pending claims, as amended, are not obvious in view of the cited references. Indeed, Lin does not disclose or suggest a ratio of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids of about 1:1:1. Taylor and Baileys do not remedy the deficiencies of Lin. Neither Taylor nor Baileys discloses or suggests a ratio of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids of about 1:1:1.

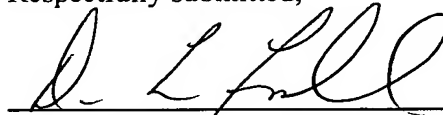
Therefore, because the cited references fail to teach or suggest the claimed invention, a *prima facie* case of obviousness has not been established. *In re Royka*

II. Conclusion

It is respectfully submitted that all claims are now in condition for allowance, early notice of which would be appreciated. Should the Examiner disagree, Applicants respectfully request a telephonic or in-person interview with the undersigned attorney to discuss any remaining issues and to expedite the eventual allowance of the claims.

Except for issues payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310.

Respectfully submitted,



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